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Report of the third session of the

IPFC/IOFC JOINT WORKING PARTY OF EXPERTS ON INDIAN OCEAN AND WESTERN PACIFIC FISHERY STATISTICS

Djakarta, Indonesia, 25-30 October 1974

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
ROME, 1975

REPORT

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PREPARATION OF THIS REPORT

At its First Session in Rome, 16-20 September 1968, the Indian Ocean Fishery Commission (IOFC) decided to propose to the Indo-Pacific Fisheries Council (IPFC) the establishment of a joint working party to stimulate the development of fishery statistics within the Indo-Pacific Region. The Council at its Thirteenth Session held in Brisbane, 14-25 October 1968, agreed to this proposal.

The Working Party met on two occasions in Bangkok, once in December 1969 and again in December 1971. The Working Party met for the third time in Jakarta during 25-30 October 1974 and the present document is its report, as approved by the members.

Statements in this report do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal or constitutional status of any country, territory or sea area, or concerning the delimitation of frontiers.

Distribution

Members of the Indo-Pacific Fisheries Council
Members of the Indian Ocean Fishery Commission
Members of the Working Party
FAO Department of Fisheries
Fishery Officers in FAO Regional Offices

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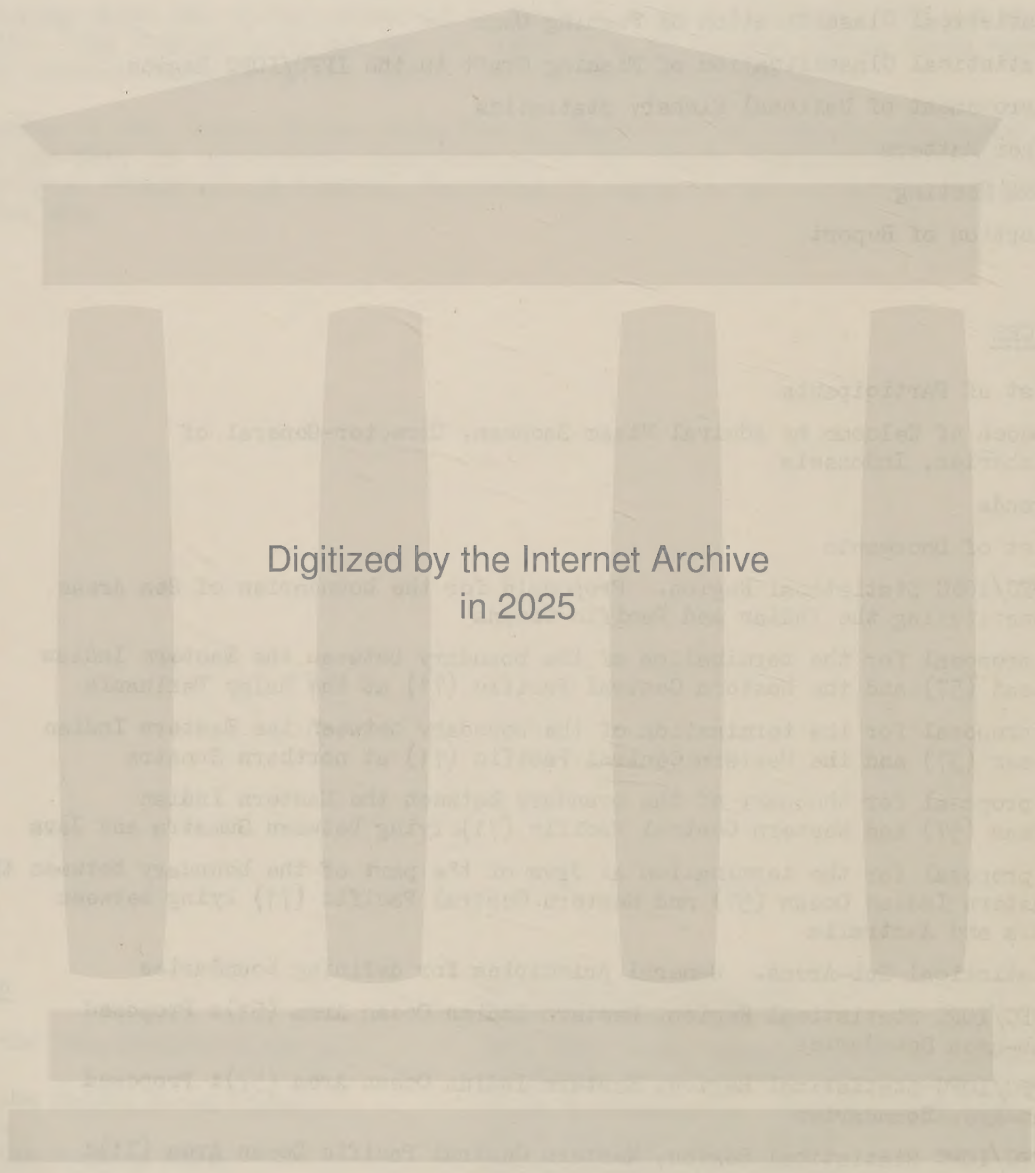

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1 INTRODUCTORY AND PROCEDURAL MATTERS

1.1 The third session of the IPFC/IOFC Joint Working Party on Indian Ocean and Western Pacific Fishery Statistics took place from 25 October to mid-day of 30 October 1974 at the City Council Hall, Jakarta, Indonesia. A list of the members of the Working Party and other participants is at Appendix I.

1.2 The participants were welcomed in an opening address by Admiral Nizam Zachman, Director General of Fisheries, Indonesia. See Appendix II.

1.3 The Working Party nominated Mr. M. Unar as Convener and Mr. I. Yamanaka as Vice-Convener.

1.4 The Working Party adopted the Agenda attached at Appendix III.

1.5 The following rapporteurs were appointed:

Agenda item 2	Mr. D. Chakraborty
Agenda item 3	Dr. G. Murphy
Agenda item 5	Dr. T. Yamamoto
Agenda item 6	Mr. C.M. Ramos and Mr. P.N. Kamande
Agenda item 7	Mr. S.K. Banerji

2 IPFC/IOFC STATISTICAL REGION

2.1 Introduction

The Working Party considered document IPFC/IOFC/ST/30 with Addenda I and II and dealt with the subject under the six following headings:

(i) The Region and Area Boundaries
(ii) Sub-areas - General Principles
(iii) Area 51, Western Indian Ocean - Proposed Sub-area Boundaries
(iv) Area 57, Eastern Indian Ocean - Proposed Sub-area Boundaries
(v) Area 71, Western Central Pacific - Proposed Sub-area Boundaries
(vi) Area 81, Southwest Pacific - Proposed Sub-area Boundaries

2.2 The Region and Area Boundaries

2.2.1 General

The third session of IOFC (Colombo, Sri Lanka, 9-13 October 1972) and the fifteenth session of IPFC (Wellington, New Zealand, 18-27 October 1972) accepted the proposal in the report of the second session of the Working Party (Bangkok, 13-17 December 1971) that the statistical interest of IPFC and IOFC should extend over the following sea areas, wholly or for an important part:

51 Western Indian Ocean
57 Eastern Indian Ocean
58 Antarctic Indian Ocean
71 Western Central Pacific
77 Eastern Central Pacific
81 Southwest Pacific
88 Antarctic Pacific

The report of the second session of the Working Party also contains descriptions of the boundaries of these seven areas and a chart depicting them. The proposals for part of the boundary between Area 57 (Eastern Indian Ocean) and Area 71 (Western Central Pacific) were made in general terms. Specifically, the sections of this boundary to be described in more detail were:

(i) the section between the Malay Peninsula and Sumatra
(ii) the section in the Sunda Strait
(iii) the termination at Java of section between Java and Australia

In the matter of area boundaries the Working Party at its third session was therefore merely concerned with finalizing those parts of area boundaries for which only general agreement had previously been obtained. However, in the course of developing proposals for sub-area boundaries one minor change was introduced into the area boundaries previously established, the case in point being the termination of the boundary between Areas 57 and 71 on the northern coast of Australia; see Section 2.2.2 (iv) and the description of Sub-area 5.0 (Western Australia) of Area 57 (Eastern Indian Ocean) in Section 2.4.3 below.

A revised map showing the sea areas constituting the IPFC/IOFC Region is presented as Appendix V. Appendixes VI to IX are charts showing the three sections of the boundary between Eastern Indian Ocean (57) and Western Central Pacific (71) in more detail than available in the chart of the Region at Appendix V. Descriptions of these three sections of this boundary follow immediately below.

2.2.2 Details of the Boundary between the Eastern Indian Ocean (57) and the Western Central Pacific (71)

(i) Termination at the Malay Peninsula (Appendix VI)

The northern boundary of Area 71 to the west of the Malay Peninsula would commence at the position 10°N 95°E and run eastward along the parallel 10°N to the meridian 97°30'E; thence due south to a point on the parallel that passes through the mid-point of the rhumb line joining a point on Murray Island (Burma) at 9°35'50"N 97°58'12"E to a point on Stork Island (Thailand) at 9°28'40"N 97°54'30"E; thence due east along this parallel to meet the Thailand/Burma frontier which will be determined in the future between Burma and Thailand.

(ii) Termination at northern Sumatra (Appendix VII)

The boundary of Area 71 in the vicinity of northern Sumatra would commence on the north coast of Sumatra at the boundary between the District of Aceh Besar and the District of Pedie (5°32'N 95°50'E) and run due north to the parallel 7°N; thence due west to the meridian 95°E; thence due north to the parallel 10°N; thence eastward to the Malay Peninsula as described immediately above.

(iii) Between Sumatra and Java (Appendix VIII)

The boundary between Sumatra and Java would commence on the coast of Sumatra at the boundary between the District of Lampung Utara and the District of Lampung Selatan (5°31'S 104°33'E) and run along a rhumb line between Cape Tjuku Redak on the mainland of Sumatra and Cape Batu Kebucung on the Island of Tebuan to the position 6°15'S 105°04'E; thence along a rhumb line between Cape Parat on the Island of Panaitan and the southeastern tip of the Island of Rakarta to the western coast of Java at the boundary between the District of Lebak and the District of Serang (6°23'S 105°49'E).

(iv) Between Java and Australia (Appendix IX)

This boundary would commence in southeastern Java at the boundary between the district of Jember and the District of Banyuwangi (8°23'S 113°28'E) and run due south to the parallel 11°30'S; thence due east to a position immediately north of the point on the coast of Australia at the boundary between the State of Western Australia and the Northern Territory; thence due south to the coast of Australia.

2.3 Sub-areas - General Principles

The general principles employed by the Working Party when considering sub-area boundaries (see Section 2.4 below) are presented at Appendix X. Except for the addition of footnote 1 c, these principles have already been presented; see Section 2.5 of the Report of the second session of the Working Party.

2.4 Proposals for Sub-area Boundaries

2.4.1 General

Proposals for the sub-area boundaries for the Western Indian Ocean (51) were presented by the Working Party in the Report of its second session; for this area the third session merely concerned itself with outstanding points of detail. For the following three areas, however,

57 East Indian Ocean
71 Western Central Pacific
81 Southwest Pacific

the proposals offered for sub-area boundaries represent the results of the Working Party's first discussions on these matters.

2.4.2 Western Indian Ocean (51)

The outstanding matters of detail for this area were the northern and southern boundaries of sub-area 5.0 (Somalia, Kenya and Tanzania); see Appendix XI.

(i) Northern Boundary of Sub-area 5.0

No objections were received from the Somali National Fishery Office on the boundary proposed by the second session of the Working Party. It might stay as shown in Appendix XI.

(ii) Southern Boundary of sub-area 5.0

This boundary might commence at the position 10°S 65°E and run due west to the meridian 45°E; thence due south to the parallel 10°28'S; thence due west to meet the coast of Africa between Ras Mwambo (to the north) and Mwambo Village (to the south.) The western termination of this boundary was established in agreement with the Tanzanian Fisheries Department and no objections have been received from the authorities responsible for Mozambique.

A description of the sub-area and division boundaries appearing in Appendix XI follows:

Area 51 Western Indian Ocean

1.0 Red Sea Sub-area

Northern limit: Northern entrance of Suez Canal.
Southern limit: A rhumb line from the frontier between Ethiopia and the French Territory of the Afars and Issas on the coast of Africa, across the mouth of the Red Sea, to the frontier between the Arab Republic of Yemen and the People's Democratic Republic of Yemen on the Arabian Peninsula.

2.0 Gulf Sub-area

The mouth of the Gulf would be closed by a line commencing at the northern tip of Ra's Musandam and running due east to the coast of Iran.

3.0 Western Arabian Sea Sub-area

The eastern and southern boundaries would be a line from the Iran/Pakistan frontier on the coast of Asia running south to the parallel 20°N; thence east to the meridian 65°E; thence south to the parallel 10°N; then west to coast of Africa. Other sea boundaries are already determined above.

4.0 Eastern Arabian Sea, Laccadive and Sri Lanka Sub-area

The sea boundary would be a line commencing on the coast of Asia at the Iran/Pakistan frontier, running south to the parallel 20°N; thence east to the meridian 65°E; thence south to the parallel 10°S; thence east to the meridian 80°E which is the boundary between the Western and Eastern Indian Ocean Areas; thence north to the parallel 5°N; thence east to the meridian 85°E; thence north to parallel 10°N; thence west along this parallel to the east coast of India.

5.0 Somalia, Kenya and Tanzania Sub-area

A line commencing on the coast of Somalia at 10°N running east to the meridian 65°E; thence south to the parallel 10°S; thence west to the meridian 45°E; thence south along this meridian to the parallel 10°28'S; thence due west along this parallel to meet the coast of Africa between Ras Mwambo (to the north) and Mwambo Village (to the south.)

6.0 Madagascar and Mozambique Channel Sub-area

The southern boundary of Sub-area 5.0 from the coast of Africa to the meridian 55°E; thence south to the parallel 30°S; thence west to the meridian 40°E; thence north along this meridian to the coast of Mozambique.

7.0 Oceanic (Western Indian Ocean) Sub-area

The Western Indian Ocean Area excluding sub-areas 1 to 6 and 8.

8.0 Mozambique Sub-area

The sub-area covers the area of overlap between the International Commission for the South East Atlantic Fisheries (ICSEAF) Area and the Western Indian Ocean Area. This area is also treated as a sub-area by ICSEAF and is further sub-divided into two divisions:

8.1 Marion-Edward Division

Waters lying between the parallels of 40°S and 50°S and the meridians of 30°E and 40°E.

8.2 Zambesi Division

Waters lying north of the parallel 40°S and between the meridians 30°E and 40°E.

2.4.3 Eastern Indian Ocean (57)

See Appendix XII. When examining the proposals for this area it was felt that, due to the lack of reliable statistics on Bangladesh and Burmese fishing activity and furthermore since all fishing by these countries was inshore, there was no need to divide the Bay of Bengal sub-area (1.0) into an Eastern Division and Western Division. It was, however, noted that the eastern termination of the southern boundary at Sumatra could only be established after discussion with the Indonesian fishery authorities to ensure proper integration with that country's national fishery statistical system. It was further felt that the Western Australia Sub-area (5.0) might be divided into two Divisions, 5.1 to the north of the Tropic of Capricorn (approx.) and 5.2 to the south, but that the matter should first be referred to the Australian fishery authorities to obtain their explicit comment.

A description of the sub-area and division boundaries proposed in Appendix XII follows:

Area 57 Eastern Indian Ocean

1.0 Bay of Bengal Sub-area

A first line commencing at 10°N on the east coast of India running due east to a meridian 85°E; thence due south to the parallel 5°N; thence due east to the coast of Sumatra at a point still to be defined upon the advice of the Indonesian fishery authorities. A second line commencing on the north coast of Sumatra at the boundary between the District of Aceh Besar and the District of Pedie running along the boundary between Area 57 (Eastern Indian Ocean) and Area 71 (Western Central Pacific) to the western coast of the Malay Peninsula.

2.0 Eastern Indian Ocean, Northern Sub-area

The Eastern Indian Ocean Area excluding Sub-areas 1 and 3 to 6.

3.0 Eastern Indian Ocean, Central Sub-area

A line commencing at the position 15°S 80°E running due east to the meridian 110°E; thence due south to parallel to 35°S; thence due west to the meridian 80°E; thence due north to the starting point.

4.0 Eastern Indian Ocean, Southern Sub-area

A line commencing at the position 35°S 80°E running due east to the meridian 110°E; thence due south to the parallel 40°S; thence due east to the meridian 135°E; thence due south to the parallel 45°S; thence due east to the meridian 150°E; thence due south to the parallel 55°S; thence due west to the meridian 80°E; thence due north to the starting point.

5.0 Western Australia Sub-area

5.1 Northern Division

A line commencing on the northern coast of Australia at the boundary between the State of Western Australia and the Northern Territory (to match the existing Australian National Fishery Statistical System) running due north to the parallel 11°30'S; thence due west to the meridian 113°28'E; thence due south to the parallel 15°S; thence due west to the meridian 110°E; thence due south to the parallel 23°30'S; thence due east to the coast of Australia.

5.2 Southern Division

A line commencing on the western coast of Australia at 23°30'S running due west to the meridian 110°E; thence due south to the parallel 40°S; thence due east to the meridian 129°E; thence due north to meet the southern coast of Australia in the vicinity of the boundary between the State of Western Australia and the State of South Australia.

6.0 Southern Australia Sub-area

A line commencing at the southern coast of Australia at 129°E (in the vicinity of the frontier between the State of Western Australia and the State of South Australia), running due south to the parallel 40°S; thence due east to the meridian 135°E; thence due south to the parallel 45°S; thence due east to the meridian 150°E; thence northward along the boundary between Area 57 (Eastern Indian Ocean) and Area 81 (Southwest Pacific) to coast of Australia in the vicinity of Cape Howe.

2.4.4 Western Central Pacific (71)

The Working Party proposed the boundaries shown in Appendix XIII, and described immediately below, with the proviso that the Secretariat should ascertain the views of the Indonesian, Malaysian and Singapore fishery authorities on boundaries between Sub-area 1 (Malacca Strait), Sub-area 2 (South China Sea) and Sub-area 4 (Indonesia). A suggestion for the east/west boundary between Kalimantan and Sumatra was a line commencing on the western coast of the island of Borneo at the boundary between Sarawak and Kalimantan, running due west to 108°E; thence due south to a position due east of the point on the coast of Sumatra given by the boundary between the Province of Riau and the Province of Jambi; thence due west along this parallel to the coast of Sumatra. With regard to the southeastern entrance to the Strait of Malacca, it was suggested that the boundary might start on the causeway joining the island of Singapore to the mainland and run due east to a position, still to be defined, thence due south to the boundary between Sub-area 2 (South China Sea) and Sub-area 4 (Indonesia.)

Finally, the Working Party was of the view that the boundary between Sub-area 2 (South China Sea) and Sub-area 3 (Philippines) whilst lying along the meridian 115°E for the major part of its length should, when approaching the coast of the island of Borneo, be moved slightly so as to reach the coast at the frontier between Sarawak and Sabah.

A description of the boundaries of the sub-areas constituting Area 71 follows. As indicated above, firm proposals for the boundaries at the junction of Sub-areas 1, 2 and 4 and between Sub-areas 2 and 3, can only be made after further study of these matters.

Area 71 Western Central Pacific

1.0 The Malacca Strait Sub-area

The area of water between the Malay Peninsula and Sumatra, with the north-western limit being the boundary with the Area 57 (Eastern Indian Ocean) and the southeastern limit being a line commencing at the mid-point of the causeway between Singapore Island and the mainland running due east to 105°E (say); thence due south to a position due east of the boundary between the Province of Riau and the Province of Jambi on the east coast of Sumatra; thence due west to the coast of Sumatra.

2.0 South China Sea Sub-area

A line crossing Hainan Strait along the meridian 110°E; then a line commencing on the east coast of Hainan Island at 20°N, running due east to the meridian 115°E; thence due south to the coast of the island of Borneo in the vicinity of the frontier between Sarawak and Sabah; thence in a southwesterly direction along the coast of the island of Borneo to the frontier between Sarawak and Kalimantan (Tanjong Datu); thence due east to the meridian 108°E; thence due south to a position due east of the boundary between the Province of Riau and the Province of Jambi on the east coast of Sumatra; thence due west to 105°E (say); thence due north to a position due east of the mid-point of the causeway between Singapore Island and the mainland; thence due west to the mid-point of the causeway.

3.0 Philippines Sub-area

A line commencing on the east coast of the island of Borneo at the frontier between Sabah and Kalimantan, running due east to the meridian 120°E; thence due north to the parallel 5°N; thence due east to the meridian 130°E; thence due north to the parallel 20°N; thence due west to the meridian 115°E; thence due south to the coast of the island of Borneo in the vicinity of the frontier between Sarawak and Sabah.

4.0 Indonesia Sub-area

All the waters of the Western Central Pacific Area (71), excluding Sub-areas 1 to 3 and 5 to 8.

5.0 Northern Australia Sub-area

A line commencing on the northern coast of Australia at the boundary between the State of Western Australia and the Northern Territory, running due north to the parallel 10°S; thence due east to a point due south of the frontier between West Irian and Papua New Guinea; thence due south to a point due west of Cape York in Australia; thence due east to Cape York.

6.0 Northeastern Sub-area

6.1 Carolines Division

A line commencing at the position 20°N 130°E, running due east to the meridian 160°E; thence due south to the parallel 5°N; thence due west to the meridian 130°E; thence due north to the starting point.

6.2 Marshall Division

A line commencing at the position 20°N 160°E, running due east to the meridian 175°W; thence due south to the parallel 5°N; thence due west to the meridian 160°E; thence due north to the starting point.

7.0 Southeastern Sub-area

A line commencing on the northern coast of the island of New Guinea at the frontier between West Irian and Papua New Guinea, running due north to the parallel 5°N; thence due east to the meridian 175°W, thence due south to the parallel 25°S; thence due west to the meridian 155°E; thence due north to the parallel 15°S; thence due east to the meridian 150°E; thence due north to the coast of Papua New Guinea.

8.0 Northeastern Australia Sub-area

The western marine boundary to be a line commencing on the southern coast of the island of New Guinea at the frontier between West Irian and Papua New Guinea running due south to a point due west of Cape York on the coast of Australia; then due east to Cape York. The eastern boundary to be a line commencing on the east coast of Australia at Danger Point (lat. 28°09'S) and running due east to the meridian 155°E; thence due north to the parallel 15°S; thence due west to the meridian 150°E; thence due north to the coast of Papua New Guinea.

2.4.5 Southwest Pacific (81)

The proposals of the Working Party are expressed in the following text and Appendix XIV.

Area 81 Southwest Pacific

1.0 North Tasman Sea Sub-area

1.1 Eastern Australia Division

A line starting on the eastern coast of Australia at Danger Point, at 28°09'S latitude and 153°34'E longitude, running due east to the meridian 155°E; thence due south to the parallel 45°S; thence due west to the meridian 150°E; thence due north along this meridian to 37°31'50"S latitude; thence along a rhumb line running northwestward to terminate on the southeast coast of Australia at the boundary between the states of New South Wales and Victoria at 37°30'22"S latitude and 149°58'30"E longitude which position is in the vicinity of Cape Howe.

1.2 Howe Division

The waters between the parallels 25°S and 45°S and the meridians 155°E and 165°E.

2.0 South Tasman Sea Sub-area

The waters between the parallels 45°S and 60°S and the meridians 150°E and 165°E.

3.0 North New Zealand Sub-area

A line commencing at a point on the west coast of the Provincial District of Auckland, New Zealand, at 35°S latitude, running due west along this parallel to the meridian 165°E; thence due north to the parallel 25°S; thence due east to meridian 165°W; thence due south to the parallel 35°S; thence due west along this parallel to the east coast of the Provincial District of Auckland.

4.0 West New Zealand Sub-area

The three marine boundaries are:

(i) A line commencing on the west coast of the Provincial District of Auckland, New Zealand, at 35°S latitude, running due west along this parallel to the meridian 165°E; thence due south to the parallel 47°S, thence due east to the west coast of Stewart Island.

(ii) A line across Foveaux Strait along the meridian 167°40'E joining South Island to Stewart Island.

(iii) A line across Cook Strait along the parallel 41°10'S joining South Island to North Island.

5.0 East New Zealand Sub-area

The three marine boundaries are:

(i) A line commencing on the east coast of the Provincial District of Auckland, New Zealand, at 35°S latitude, running due east along this parallel to the meridian 165°W; thence due south to the parallel 45°S; thence due west to the meridian 175°E; thence due south to the parallel 47°S; thence due west along this parallel to the east coast of Stewart Island.

(ii) A line across Foveaux Strait along the meridian 167°40'E joining South Island to Stewart Island.

(iii) A line across Cook Strait along the parallel 41°10°S joining South Island to North Island.

6.0 Southeast New Zealand Sub-area

The waters lying between the southern boundaries of Sub-areas 4.0 and 5.0 and the parallel 60°S and between the meridians 165°E and 165°W.

7.0 Oceanic Sub-area

The waters lying between the parallels 25°S and 60°S and the meridians 165°W and 105°W.

3 AREA STATISTICAL LISTS OF AQUATIC ANIMALS AND PLANTS

3.1 General

The Working Party considered the documents IPFC/IOFC/ST/33 (with Addenda I and II), 34, 35 and 36. The paper IPFC/IOFC/ST/37, which is concerned with area 81 (Southwest Pacific) was not reviewed partly for lack of time but mainly because it was thought that the paper could best be considered at a further meeting of the Working Party to which a New Zealand expert might be invited.

3.2 The International Standard Statistical Classification of Aquatic Animals and Plants (ISSCAAP)

The main structure of ISSCAAP is at pages 1 and 2 of Appendix XV. It is a broad classification consisting of nine Divisions which are further subdivided into 51 Groups and is intended for world-wide application as, for example, in the publication FAO Yearbook of Fishery Statistics (Catches and Landings.) However, in recent years it had become apparent that because the classification was developed primarily with cold water fisheries in mind (since at one time these fisheries dominated reported world fishing activity) it was not always suitable for breaking down, by broad groups of species, catches taken in tropical waters which are of ever-growing importance.

It was agreed that there was a need for some changes to ISSCAAP which should, however, be kept to the minimum; they might include the division of Groups 33, 34 and 36 into smaller Groups more homogeneous in content. The Working Party consequently undertook to inform the FAO Secretariat of names and addresses of any of their scientific colleagues particularly interested in this matter so that the FAO Secretariat could send them the necessary documentation for comment. It was noted that work on this task would be facilitated by the four-volume publication, FAO Species Identification Sheets for Fishery Purposes, Eastern Indian Ocean (Fishing Area 57) and Western Central Pacific (Fishing Area 71) which was also considered by the Working Party; see Section 4 below.

3.3 Statistical Species Lists

Statistical Species Lists prepared by the Working Party for the Western Indian Ocean (51), the Eastern Indian Ocean (57) and the Western Central Pacific (71) are at Appendix XV. In addition, during the course of the item by item consideration of the lists for those areas the following points were made:

(i) The lists developed by the Working Party should be circulated to all appropriate agencies in the member countries of IPFC and/or IOFC for comments and suggestions for improving the applicability of the lists to the Indo-Pacific fauna and national fishery statistical systems. Comments and suggestions should be forwarded to the Technical Secretary of the Working Party, FAO, Rome.

(ii) Since it was desirable to make future area statistical bulletins (see Section 8) more detailed by allocating catches to sub-areas (see Section 2) whenever possible, it was necessary to accept smaller catch quantities as a criterion for an item appearing in a list than if one was merely considering catches by area.

(iii) With regard to Group 36 the Working Party noted that the first two items for Areas 51 and 71 and the first item for Area 57 (Scomberomorus listings), should be placed in Group 37 and hoped that this could be remedied at the earliest. Alternatively, Group 36 might be split into two parts; see Section 3.2 above.

(iv) The Working Party drew attention to the large quantities of fish caught allocated to Group 39, Miscellaneous Marine Fishes, and urged that the countries concerned attempt, as soon as possible, to produce species breakdowns for these quantities; see Section 7 below.

(v) The Working Party queried the English names assigned to the various prawns in Group 45 and requested the FAO Secretariat to review their general applicability.

(vi) The Working Party noted the absence of Slipper lobster in the working paper and requested the FAO Secretariat to inquire into the reason for this.

(vii) The Working Party particularly requested the FAO Secretariat to consider using "Red snapper" as the official FAO name for Lutjanus spp. (Appendix XV, page 6, column 7.) The Working Party was also of the view that FAO should cease using Scad as the international English name for Decapterus spp. (Appendix XV, page 9, cols. 5 and 7) but could propose no alternative itself.

4 FAO SPECIES IDENTIFICATION SHEETS FOR FISHERY PURPOSES

The Working Party reviewed the document IPFC/IOFC/ST/39 and an example of the 4-volume publication:

FAO Species Identification Sheets for Fishery Purposes
Eastern Indian Ocean (Fishing Area 57)
Western Central Pacific (Fishing Area 71)

The publication was warmly approved by the Working Party which recommends that every effort should be made to complete the programme.

The Working Party also recommends that the programme be expanded to include:

Western Indian Ocean (Fishing Area 51)
Southwest Pacific (Fishing Area 81)

as soon as practicable. It was noted that the programme for the present publication was preceded by an FAO/DANIDA Seminar in Southeast Asia (Phuket, Thailand, Nov./Dec. 1972; Report of Seminar, FAO/DEN/TF88, FAO, Rome, 1973) and the Working Party was of the view that attempts should be made to hold similar seminars for the other two sea areas.

The Working Party was informed that copies of the present publication would be widely distributed throughout the IPFC/IOFC Region and urged that comments on the sheets already produced, and on the list of species for which it is intended to produce sheets in the near future, should be sent to the Editor as soon as possible. It was also urged that each country supply the Editor with national official names for entry on the pertinent sheets. It was hoped that countries whose official language is one of the official FAO languages would consider using FAO official names as national official names. The Working Party also noted that the sheets provided a basis for producing national handbooks, limited to the sheets of each particular country, in the language of that country.

Lastly, the Working Party was informed that the Far Seas Fisheries Laboratory, Japan Fisheries Agency, 1000 Orido, Shimizu 424, Japan, had recently produced a volume containing information, with coloured plates, on 500 species of the Northwest Pacific and off New Zealand and Madagascar and was soon to complete a similar publication for about 500 species, mainly demersal, off Northwest Australia, in the Arabian Sea, around the Seychelles and off Mozambique.

5 STATISTICAL CLASSIFICATION OF FISHING GEAR

The Working Party considered the paper IPFC/IOFC/ST/31, and agreed that the proposed International Standard Statistical Classification of Fishing Gear (ISSCFG) could be accepted with certain modifications to replace Classification of Fishing Gear for use in the IPFC/IOFC Region (RECCFG), since both classifications had been established using more or less similar principles. The proposed ISSCFG incorporating modifications suggested by the Working Party is given in Appendix XVI.

In reviewing the paper in question the Working Party expressed the view that ISSCFG was intended to be used for the compilation of statistics on fishing establishments (i.e., fishery management units) classified by types of gears employed and that it should be taken into account when compiling statistics of catch (or fishing effort) by type of fishing gear or fishing operational unit; see Section 6 below.

6 STATISTICAL CLASSIFICATION OF FISHING CRAFT IN THE IPFC/IOFC REGION

The Working Party discussed the paper IPFC/IOFC/ST/32 and agreed that the purpose of such a classification was necessary for obtaining the fleet structure of a country and for the purpose of collecting catch and effort data.

It was first decided that for the purpose of classification, distinction should be made between small-scale fisheries and large-scale fisheries. For the small-scale fisheries the Working Party proposed the following classification:

1.0 Powered Craft
1.1 With inboard engines
1.2 With outboard engines
2.0 Non-Powered Craft

Further classification of non-powered craft should be decided upon by countries themselves according to their national needs.

For the large scale fisheries in which all the vessels would normally be inboard powered, the Working Party proposed the following broad classification as adequate for international reporting:

1. Trawlers
2. Purse Seiners
3. Gill-netters
4. Long-liners
5. Others

It was decided that further breakdown into vessel size classes (using e.g. tonnage or horse power as the control characteristic) should be left to the discretion of countries according to their national requirements.

7 IMPROVEMENT OF NATIONAL FISHERY STATISTICS

In the review by the Working Party of document IPFC/IOFC/ST/38, it was recalled that the terms of reference of Working Party included not only the establishment of a system for the reporting of statistics by the National Governments to a Regional or International Agency, but also called for special attention to be given to the development of national fishery statistical systems.

The paper first briefly described, separately for the small-scale and large-scale fisheries, the various alternative sample survey designs that could be introduced. The types of frame necessary for each of these designs were also mentioned. The paper also discussed the various factors that have so far inhibited the introduction of scientific survey methods, utilizing, inter alia, objective measurement, and how with international assistance these difficulties could be partially overcome. It also drew attention to the fact that the two regional projects, the Indian Ocean Programme (IOP) and the South China Sea Programme (SCSP) could render assistance to the countries of the IPFC/IOFC Region in this respect. The paper was well received and the Working Party suggested that it might be reproduced, with suitable elaboration, for distribution among the countries of the IPFC/IOFC region.

The Working Party felt that scientific sampling methods for the estimation of fish catches should be introduced as soon as possible in fisheries where complete enumeration was not possible; for this purpose quick and inexpensive frame surveys might be immediately undertaken. It was suggested that Population and Agricultural Censuses could be used for the purpose of frame building provided that the frame could be obtained quickly after the completion of the Census field operations.

8 OTHER MATTERS

8.1 Regional Fishery Statistical Bulletins

8.1.1 Introduction

The Working Party considered that one of its important aims was to promote the production for, say, the Indian Ocean, the Western Central Pacific and the Southwest Pacific, something like the statistical publications of ICES and ICNAF[1] and for this purpose the following was needed:

(i) determination of the types of data to be included in the bulletin
(ii) production at national level of the data required at international level
(iii) transmission of these data to a regional agency (at present FAO), i.e., the establishment of a standardized international reporting system
(iv) processing of the received data by FAO and its publication

---

1/ International Council for the Exploration of the Sea
International Commission for the Northwest Atlantic Fisheries

8.1.2 Required data

The present regional statistical circulars produced by FAO were available to Working Party as IPFC/IOFC/ST/34 to 37 and it was noted that their contents were limited to total annual catch by area, by country, by species (or group of species). The Working Party felt that these bulletins could be improved in many ways including:

(1) improvement of the timeliness, quality, completeness and sufficiency of the data they already presented
(2) expansion to include tables showing catch broken down by sub-area
(3) expansion to include tables showing catch and effort data for selected fisheries.

It was felt that at a later date, consideration could be given to including tables showing fleet size and structure, fishing manpower, landings and their values, prices, consumption, trade, etc.

8.1.3 Production of data at national level

In this matter countries could be helped by taking advantage of the Fishery Statisticians (at present or soon to be) within the Indian Ocean Programme and the South China Sea Programme. The aid of Fishery Statisticians could also be obtained through national projects funded by UNDP (e.g.,as in Indonesia) and other sources. See also Section 7 above and Annex V of the Report of the First Session of the Working Party.

8.1.4 The international reporting system

With this in mind the Working Party was concerned with establishing the constituent elements of the system which are:

(i) Defined regional sea areas and sub-areas
(ii) Regional species lists for statistical purposes
(iii) A vessel classification (size of vessel and method of fishing)
(iv) Units of effort measurement applicable to specific fisheries

Work has commenced on items (i) to (iii) as recorded in Sections 2, 3 and 6 above, but still has to commence on item (iv).

8.1.5 Processing of received data and their publication

Especially as it is soon to employ Automatic Data Processing procedures, FAO is capable of publishing annually, all the data presently reported at regional level, i.e., annual catch by area, by country and by species (or groups of species). When it becomes apparent that the international reporting system is to commence providing more detailed annual catch statistics, e.g., on a sub-area basis (see section 8.2 below) then consideration will be given by FAO to making provision for processing them and expanding the present bulletins.

8.2 Future Programme of the Working Party

As soon as some minor difficulties in defining some sub-area boundaries are resolved and comments are received from countries on the proposed statistical species lists, the FAO Secretariat will prepare the forms and instructions required for the reporting by national offices to FAO, Rome, catch broken down by sub-area (as defined in Section 2) and by species or species groups (as defined in Section 3), for:

(i) Area 51 Western Indian Ocean
(ii) Area 57 Eastern Indian Ocean
(iii) Area 71 Western Central Pacific

The forms and notes will be sent to all countries fishing these areas and they will be asked to complete the forms for a recent year (this is not to be confused with the normal reporting system already in existence) and return them to Rome. The FAO Secretariat will analyse the results of the test and present a report to the Fourth Session of the Working Party which will then be able to evaluate the applicability of the regional reporting system to the three areas in question and modify it if considered necessary.

The FAO Secretariat and Working Party will also:

(1) Proceed with the establishment of a Statistical List of Species for Area 81, Southwest Pacific
(2) Concern itself with the production of practical handbooks on the application of modern statistical methods (including the use of scientific sampling techniques) to the collection, compilation and use of fishery statistics
(3) Concern itself with the running of regional training courses in fishery statistics
(4) Concern itself with conversion factors used within the IPFC/IOFC Region for converting (a) landed fish weights to equivalent live weights (nominal catch) (b) fishery commodities in product weight to equivalent live weight

8.3 Availability of Catch Statistics for the IPFC/IOFC Region

8.3.1 General

The Working Party considered the availability of annual catch statistics for the four areas of major interest to the IPFC/IOFC Region. The Working Party therefore reviewed the promptness with which countries at present reported to FAO their estimates of total annual catch broken down by area and species. In Table 1 below the situation is summarized. The current situation is indicated by ignoring the quantities and percentages in brackets. By next year with the transfer of one important fishing country from Class B (Medium) to Class A (Satisfactory) the situation is indicated by replacing unbracketed quantities and percentages by bracketed quantities and percentages where they occur.

8.3.2 Conclusions

In general it would appear that, in the not-too-distant future, the total annual catches will be reported, in good time, to FAO Headquarters, Rome, with a satisfactory species breakdown, and thus ensure their early inclusion in the FAO Yearbook of Fishery Statistics (Catches and Landings) and the pertinent area statistical bulletins. The main area of difficulty would appear to be Group B for Area 57 (Eastern Indian Ocean) and Area 71 (Western Central Pacific). The countries concerned with the larger gaps in these most basic of fishery statistics were urged to take steps to develop their national statistical systems as soon as possible, taking advantage of the assistance offered by the Indian Ocean Programme (IOP) and the South China Sea Programme (SCSP). Indeed some of the countries concerned had already taken steps to obtain the necessary aid.

9 NEXT MEETING

The Working Party was of the view that the Fourth Session should take place in about two years time, perhaps in conjunction with the 17th Session of IPFC. It was also thought that consideration might be given to holding the next Session of the Working Party in conjunction with a Session of IOFC provided that one took place in about two years time.

10 ADOPTION OF REPORT

The Report of the Third Session of the IPFC/IOFC Joint Working Party of Experts on Indian Ocean and Western Pacific Fishery Statistics was adopted.

Table I: The availability in FAO of Statistics of catch by Country, by Area and by Species (or groups of species.) 1/

Availability Class	Number of reporting countries, territories etc.	1972: Nominal catches ('000 mt and percentage)									
		Area 51 Western Indian Ocean		Area 57 Eastern Indian Ocean		Area 71 Western Central Pacific		Area 81 South East Pacific		Total	
		wt	%	wt	%	wt	%	wt	%	wt	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
A. Satisfactory	18 (19)	1 263.9	73	414.0	53	2 314.4 (3 861.9)	49 (81)	268.2	92	4 260.5 (5 808.0)	56 (77)
B. Mediocre	23 (22)	304.3	18	324.0	41	2 206.6 (659.1)	47 (14)	-	-	2 834.9 (1 287.4)	38 (17)
C. Poor	24	F/ 161.4	9	F/ 46.5	6	F/ 223.5	5	F/ 23.3	8	F/ 454.7	6
Total	65	F/ 1 729.6	100	F/ 784.5	100	F/ 4 744.5	100	F/ 291.5	100	F/ 7 550.1	100

A. Satisfactory - Totals with good species breakdown received promptly
B. Mediocre - Totals with poor species breakdown received promptly, or total catch with good species breakdown received tardily
C. Poor - No statistics at all received in recent years
F/ FAO Estimate
Source: FAO Yearbook of Fishery Statistics (Catches and Landings) Vol. 34

1/ This analysis does not consider the quality of the available statistics. For discussion on the figures in brackets, see text.

Appendix I

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* * * * * *

Appendix II

SPEECH OF WELCOME

by

Admiral Nizam Zachman
Director-General of Fisheries
Indonesia

Gentlemen,

It is my privilege and pleasure to welcome the distinguished participants to this third meeting of the IPFC/IOFC Joint Working Party of Experts on Indian Ocean and Western Pacific Fishery Statistics. We, in this Jakarta City Council Hall, will try to provide you with all possible facilities so that your deliberations may be brought to the most successful conclusion.

As you are aware, the first and second meetings of the present Working Party were held in Bangkok in 1969 and 1971 respectively. The outcome of these two meetings was mainly concerned with the establishment of fishery statistical standards with a view to making national fishery statistics comparable between the countries fishing in the IPFC/IOFC Region. Although many of the proposals regarding such statistical standards have already been accepted by the previous sessions of IPFC and IOFC, I understand that some of them are still in need of further refinement. These matters will be dealt with by you in this present meeting.

With the acceptance by IPFC and IOFC of the proposed statistical standards, we still, however, have to recognize that the reliability and adequacy of fishery statistics have to be improved by developing better survey methodology and more efficient field operations and office procedures. In this regard I am very glad to note that the Working Party is to start considering these matters and the results of your discussions will be of great interest to the developing countries of the IPFC/IOFC Region. I am also very pleased to note that practical advice can be obtained from Dr. T. Yamamoto who is working in Indonesia and from Mr. S. K. Banerji who is a Fishery Statistician working in the Indian Ocean Programme. I also look forward to the appointment of yet a third FAO Fishery Statistician to the South China Sea Programme in the very near future.

Lastly I hope, that besides having a successful meeting you will also find time to visit and enjoy some of the interesting places in Jakarta and in the surrounding countryside.

Thank you.

* * * * * *

Appendix III

AGENDA

		Document
1	Procedural and introductory matters	
2	IPFC/IOFC statistical region	IPFC/IOFC/ST/30
3	Area statistical lists of aquatic animals and plants	IPFC/IOFC/ST/33 to 37
4	FAO species identification sheets for fishery purposes	IPFC/IOFC/ST/39
5	Statistical classification of fishing gear	IPFC/IOFC/ST/31
6	Classification of fishing craft and gear for the purpose of reporting catch and effort statistics	IPFC/IOFC/ST/32
7	Improvement of national fishery statistics	IPFC/IOFC/ST/38
8	Other matters	
9	Next meeting	
10	Adoption of report	IPFC/IOFC/ST/43

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Appendix IV

LIST OF DOCUMENTS

IPFC/IOFC/ST/30	IPFC/IOFC Statistical Region: Proposals for Area and Subarea Boundaries for Four Constituent Areas
31	International Standard Statistical Classification of Fishing Gear (ISSCFG) and its Adaptation for Use in the IPFC/IOFC Region in the Place of Classification of Fishing Gear for Use in the IPFC/IOFC Region (REGCFG)
32	Classification of Fishing Vessels in the IPFC/IOFC Region
33	Area Statistical Lists of Aquatic Animals and Plants for Four Areas in the IPFC/IOFC Region
34	FAO Fisheries Circular No. 620 INDIAN OCEAN, WESTERN (Fishing Area 51) Nominal Catches by Species and by Countries, 1965-72
35	FAO Fisheries Circular No. 621 INDIAN OCEAN, EASTERN (Fishing Area 57) Nominal Catches by Species and by Countries, 1965-72
36	FAO Fisheries Circular No. 624 PACIFIC, WESTERN CENTRAL (Fishing Area 71) Nominal Catches by Species and by Countries, 1965-72
37	FAO Fisheries Circular No. 626 PACIFIC, SOUTHWEST (Fishing Area 81) Nominal Catches by Species and by Countries, 1965-72
38	Improvement of National Fishery Statistics
39	FAO Species Identification Sheets for Fishery Purposes Fishing Areas 57 and 71: Eastern Indian Ocean and Western Central Pacific
40	Annotated Provisional Agenda
41	Provisional Time Table
42	List of Documents
43	Draft Report of the Third Session of the IPFC/IOFC Joint Working Party of Experts on Indian Ocean and Western Pacific Fishery Statistics, Jakarta, Indonesia, 25-30 October 1974

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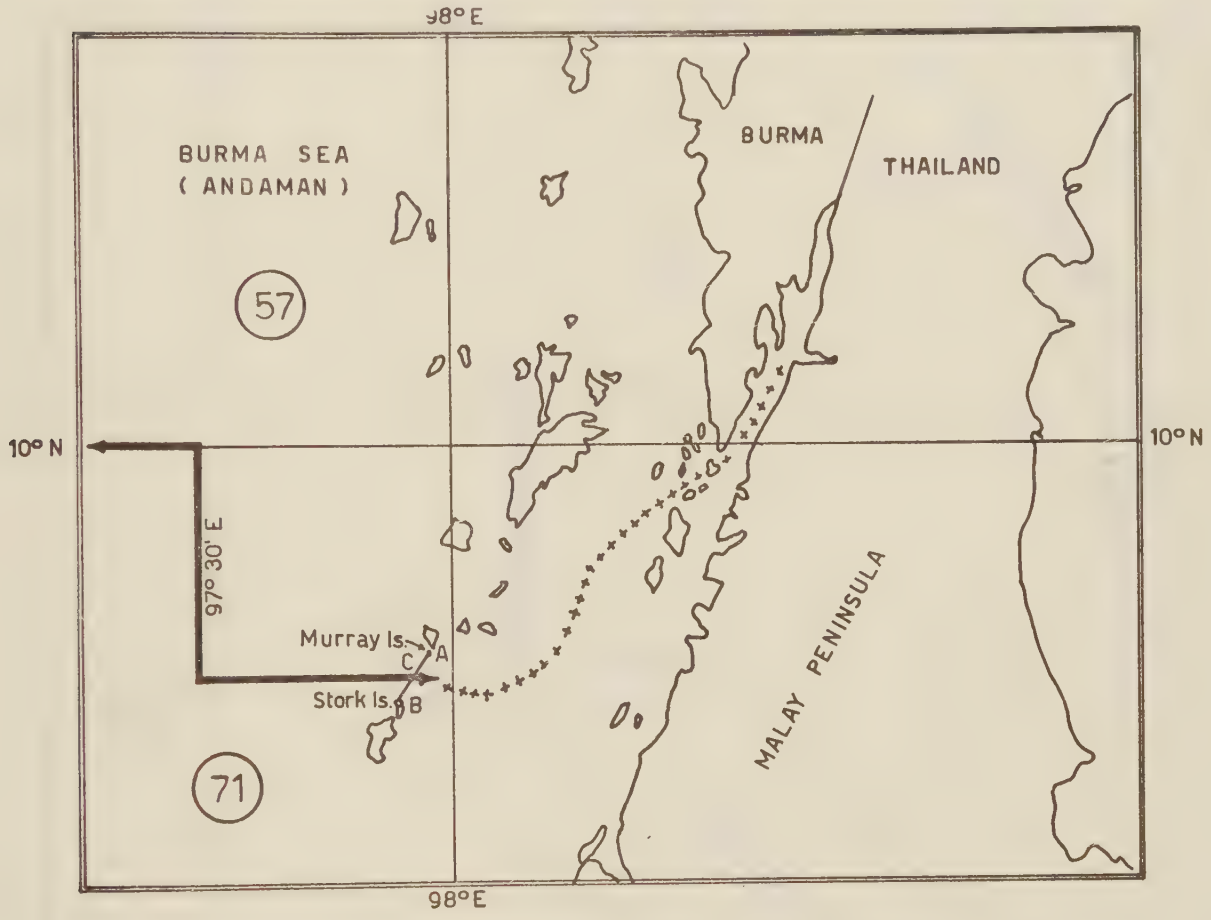
Appendix VI

A proposal for the termination of the boundary between the Eastern Indian Ocean (57) and the Western Central Pacific (71) at the Malay Peninsula

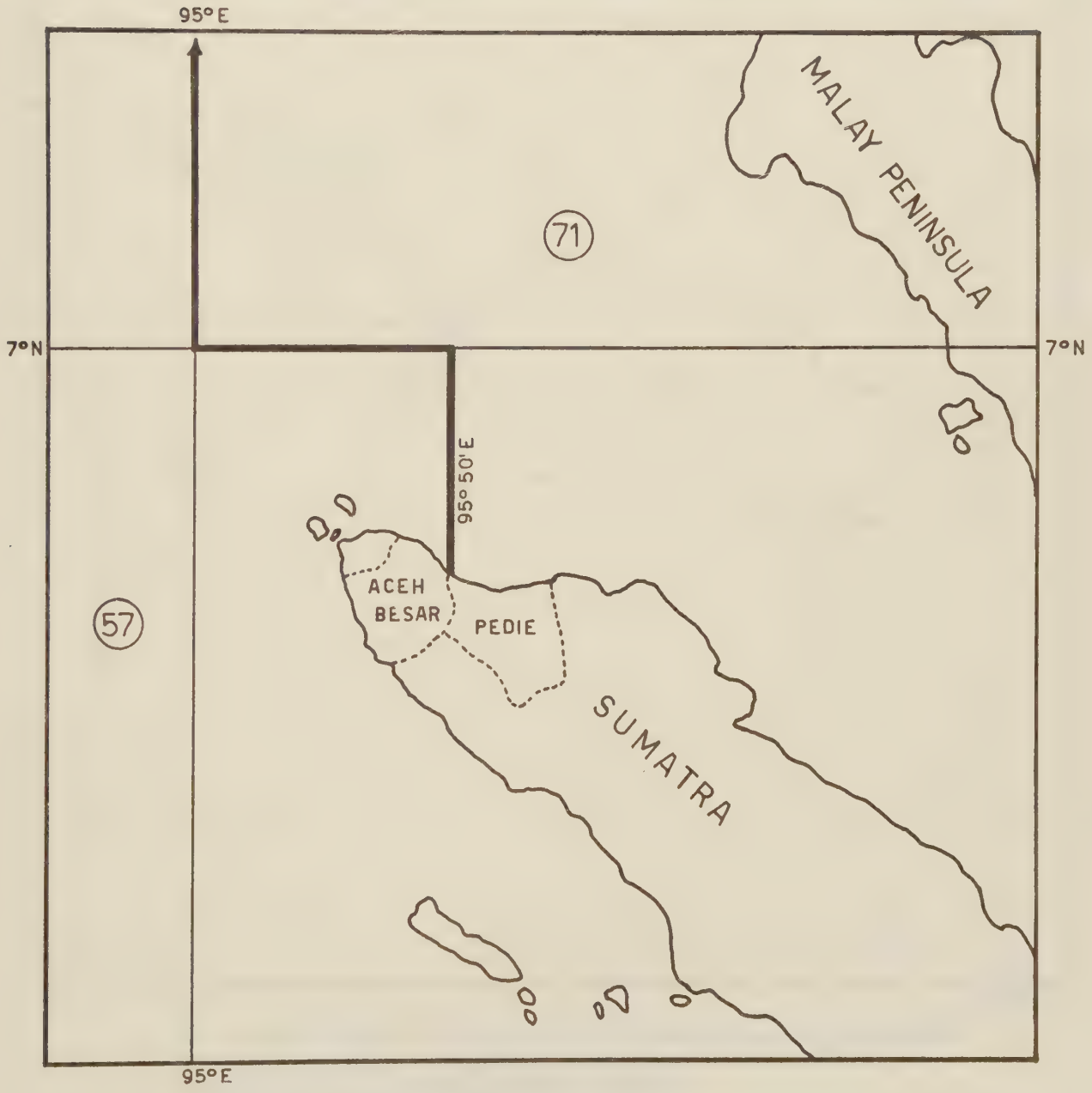


A: Murray Island (Burma) 9°35' 50" N - 97°58' 12" E
B: Stork Island (Thailand) 9°28' 40" N - 97°54' 30" E
C: Midpoint of rhumb line joining AB.
xxx: The frontier between Burma and Thailand still to be determined

57 Eastern Indian Ocean
71 Western Central Pacific

Appendix VII

A proposal for the termination of the boundary between the Eastern Indian Ocean (57) and the Western Central Pacific (71) at northern Sumatra



57 Eastern Indian Ocean
71 Western Central Pacific

Appendix VIII

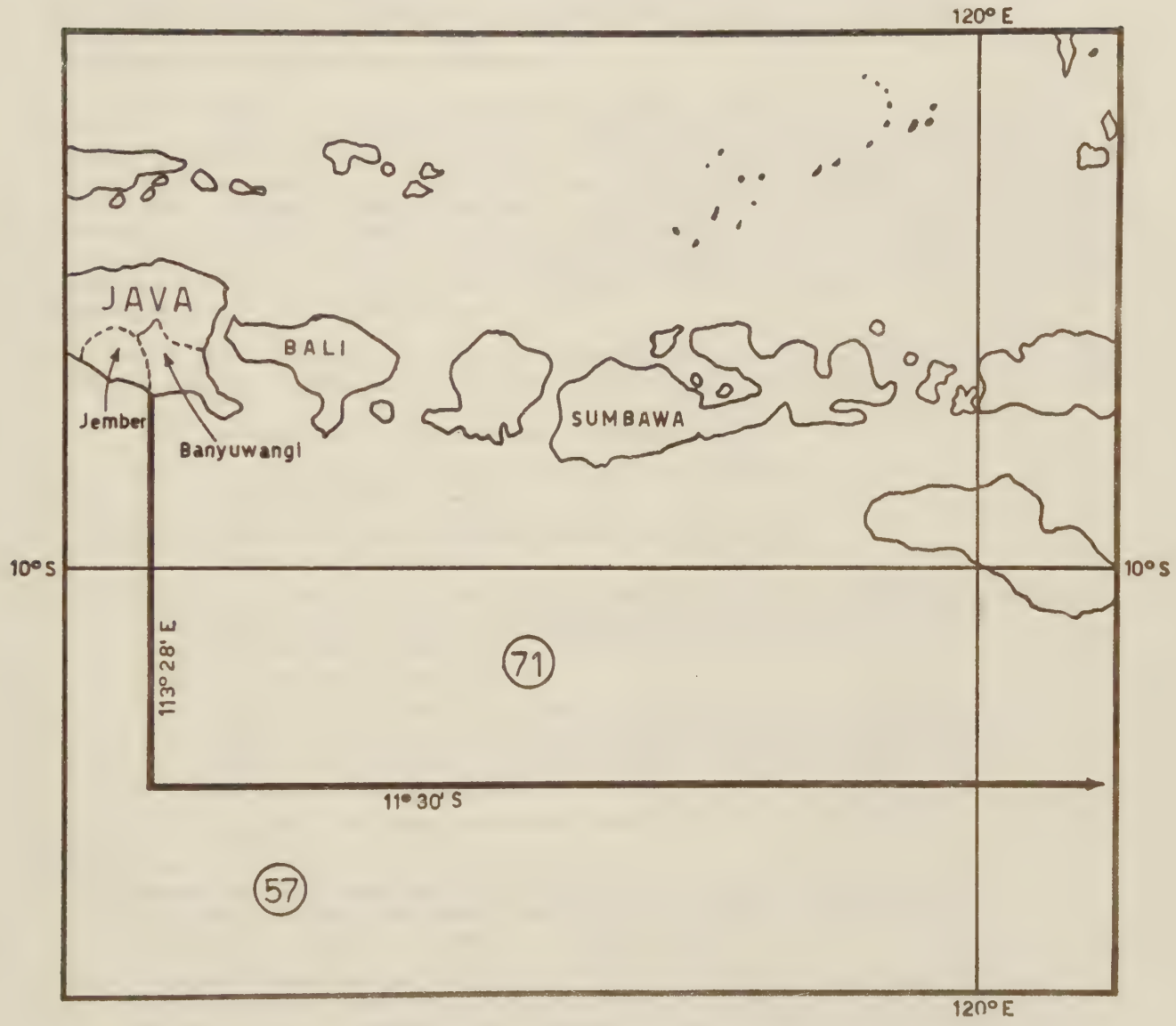
A proposal for the part of the boundary between the Eastern Indian Ocean (57) and Western Central Pacific (71) lying between Sumatra and Java

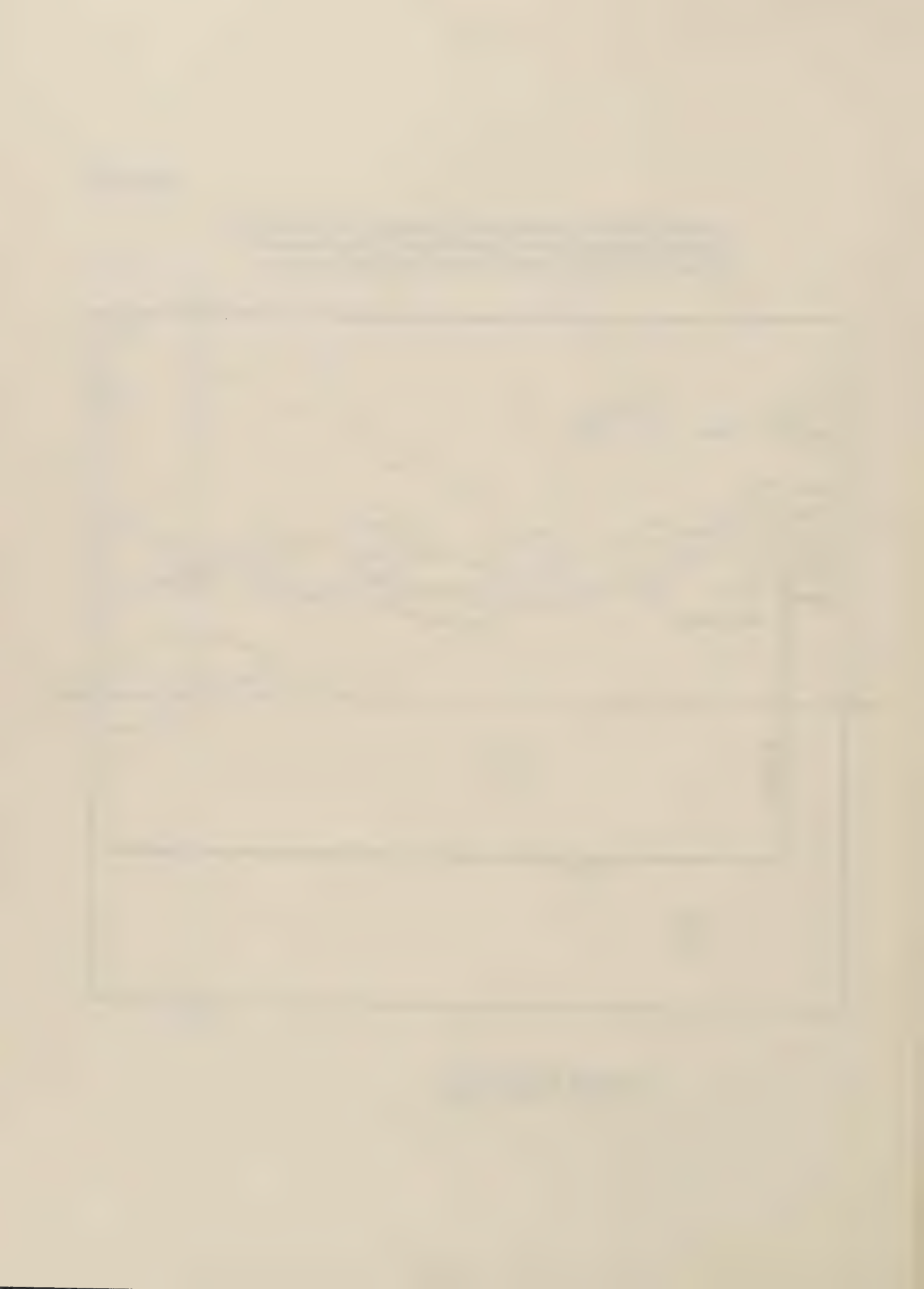
A: The boundary between the District of Lampung Utara and the District of Lampung Selatan on the coast of Sumatra; 5°31'S 104°33'E
B: Position: 6°15'S latitude 105°04'E longitude
C: The boundary between the District of Lebak and the District of Serang on the coast of Java; 6°23'S 105°49'E

57 Eastern Indian Ocean
71 Western Central Pacific

Appendix IX

A proposal for the termination at Java of the part of the boundary between Eastern Indian Ocean (57) and Western Central Pacific (71) lying between Java and Australia



57 Eastern Indian Ocean
71 Western Central Pacific

Appendix X

STATISTICAL SUB-AREAS
GENERAL PRINCIPALS FOR DEFINING BOUNDARIES

1. It is recognized that the further division of major sea areas into sub-areas is necessary to permit a deeper study of the development of fishery exploitation than that made possible by the division into major sea areas only. It is also to be noted that a sub-area is the largest unit area, data on which can be used for stock assessment work and resources management.

It is further to be noted that since demersal stocks are often less mobile and occurred in more easily definable areas, first attention should be given to these stocks but the distribution of pelagic stocks should also be taken into account. Tuna resources, however, are not to be taken into account when establishing a sub-area due to the ocean-wide migratory nature of this group of species. Moreover, the definition of areas for tuna statistics are the responsibility of committees and other bodies directly concerned with this fish and these bodies prefer the use of 5° squares. Lastly, it is also to be noted that the identification of stocks is not yet well developed in the IPFC/IOFC Region.

2. It is therefore proposed that the following principles and factors should be kept in mind when the boundaries of statistical sub-areas are being established:

(i) The natural divisions of the oceans and seas[1/].

(ii) The structure of the resources and the environmental conditions within the area.

(iii) Statistical sea boundaries already established for international purposes.

(iv) Unless there are over-riding reasons boundary lines should be drawn along 5° lines of latitude and longitude. Where this is not suitable 1° lines of latitude and longitude should be followed as far as possible.

(v) Where the boundary of a sub-area terminates at a coast, cognizance should be taken of the pertinent national fisheries and related statistical systems. Boundaries should also take cognizance of integrated island systems.

(vi) Changes in sub-area boundaries should not be made frequently.

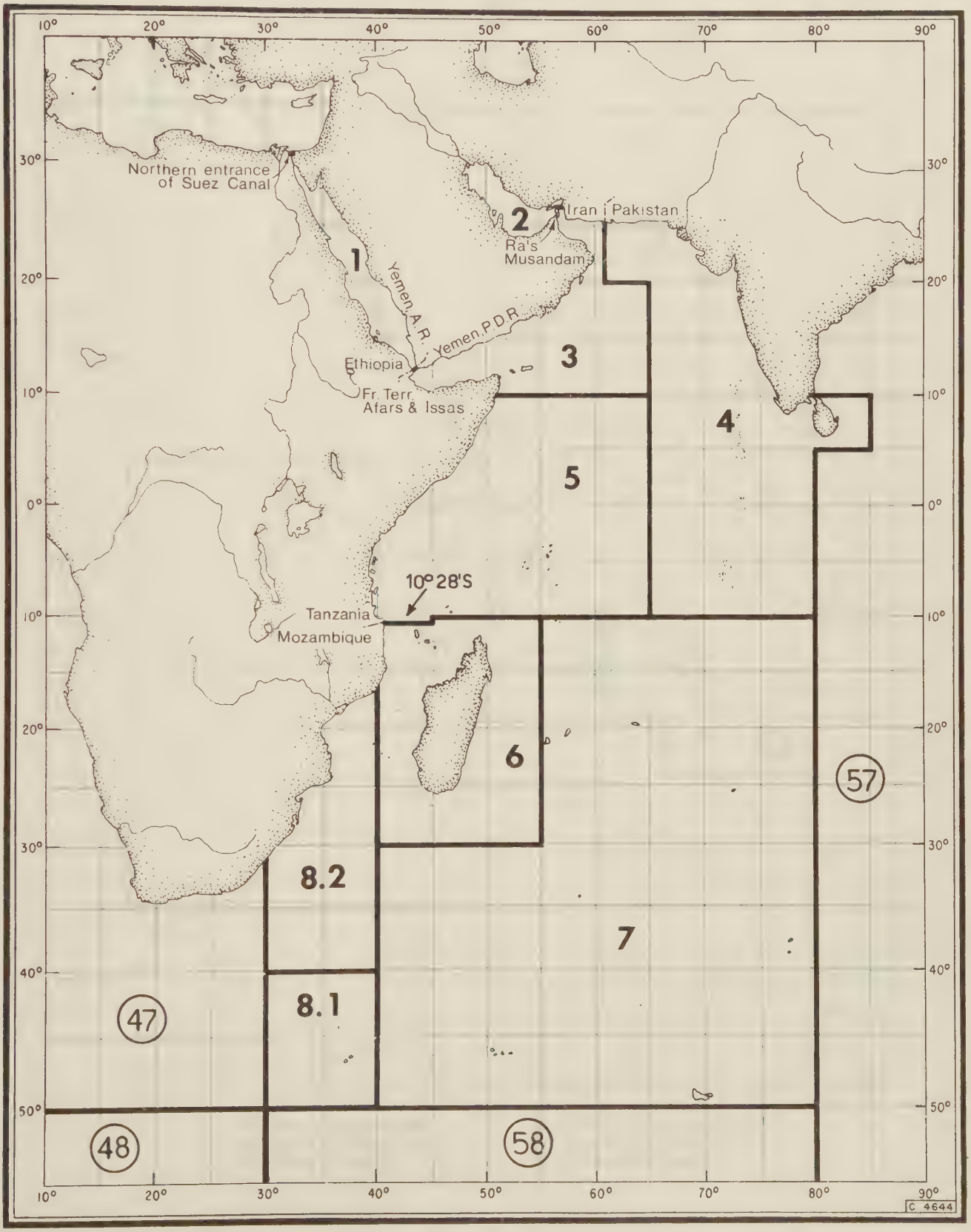
1/ (a) Closed sea areas such as the South China Sea and the Red Sea might be considered as sub-areas since fish in such seas might not be expected to migrate to other sub-areas to a great extent.

(a) Other sea areas such as the Arabian Sea and the Bay of Bengal might be divided into at least two sub-areas one based on the east side of the sea and the other on the west, most fishery resources being found fairly close to the coast for which separate stocks might exist even for the same species. If necessary a sub-area lying between coastal sub-areas on either side of a large sea might be established.

(c) The configuration of the continental shelf and its adjoining slope down to 1000 m should be taken into consideration because the distribution of not only demersal but also many other coastal resources depend upon it.

APPENDIX XI

IPFC/IOFC STATISTICAL REGION: WESTERN INDIAN OCEAN AREA (51)
PROPOSED SUB-AREA BOUNDARIES

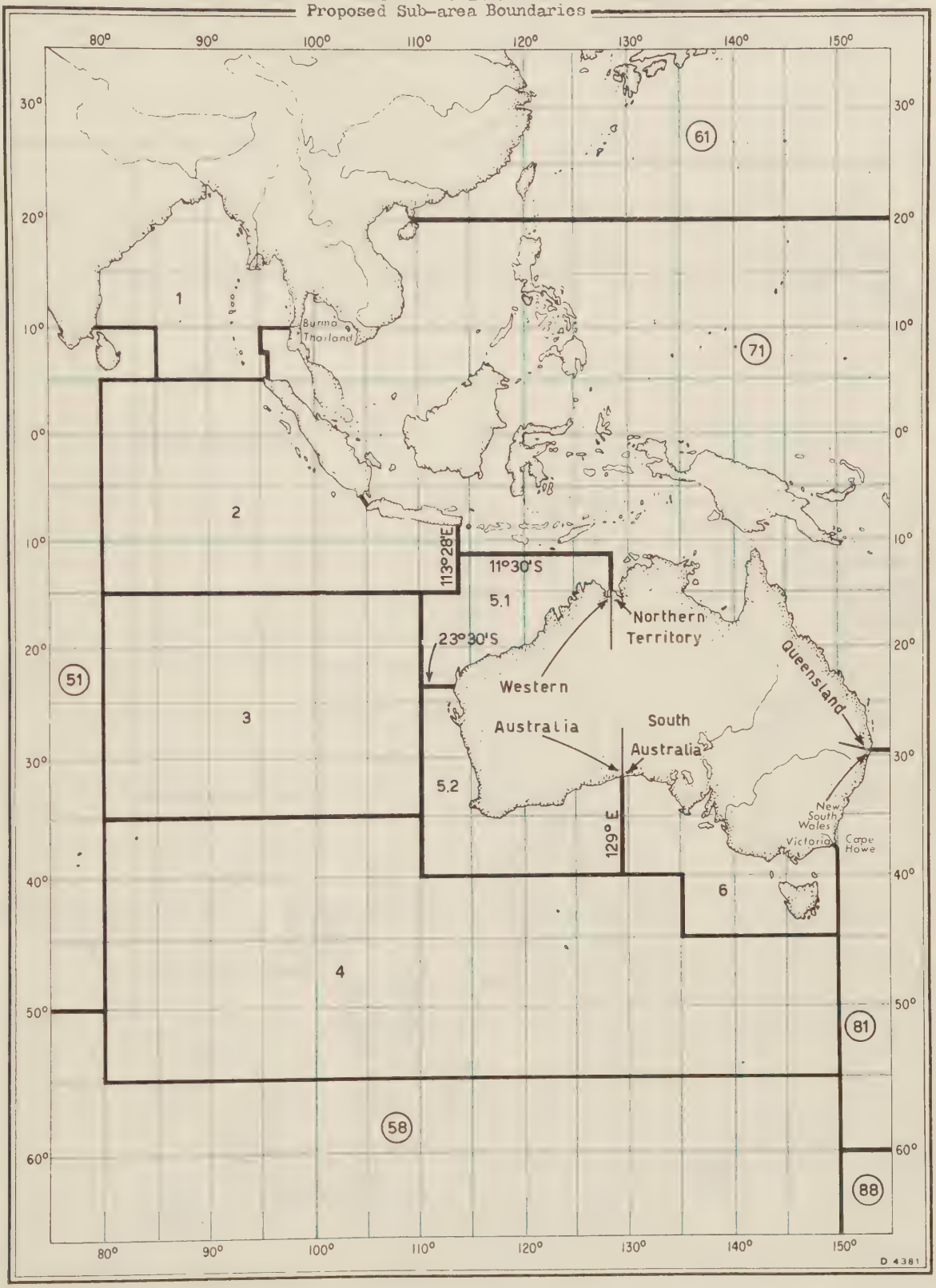


47 Southeast Atlantic
48 Antarctic Atlantic
57 Eastern Indian Ocean
58 Antarctic Indian Ocean

Appendix XII

IPFC/IOFC STATISTICAL REGION: EASTERN INDIAN OCEAN AREA(57)

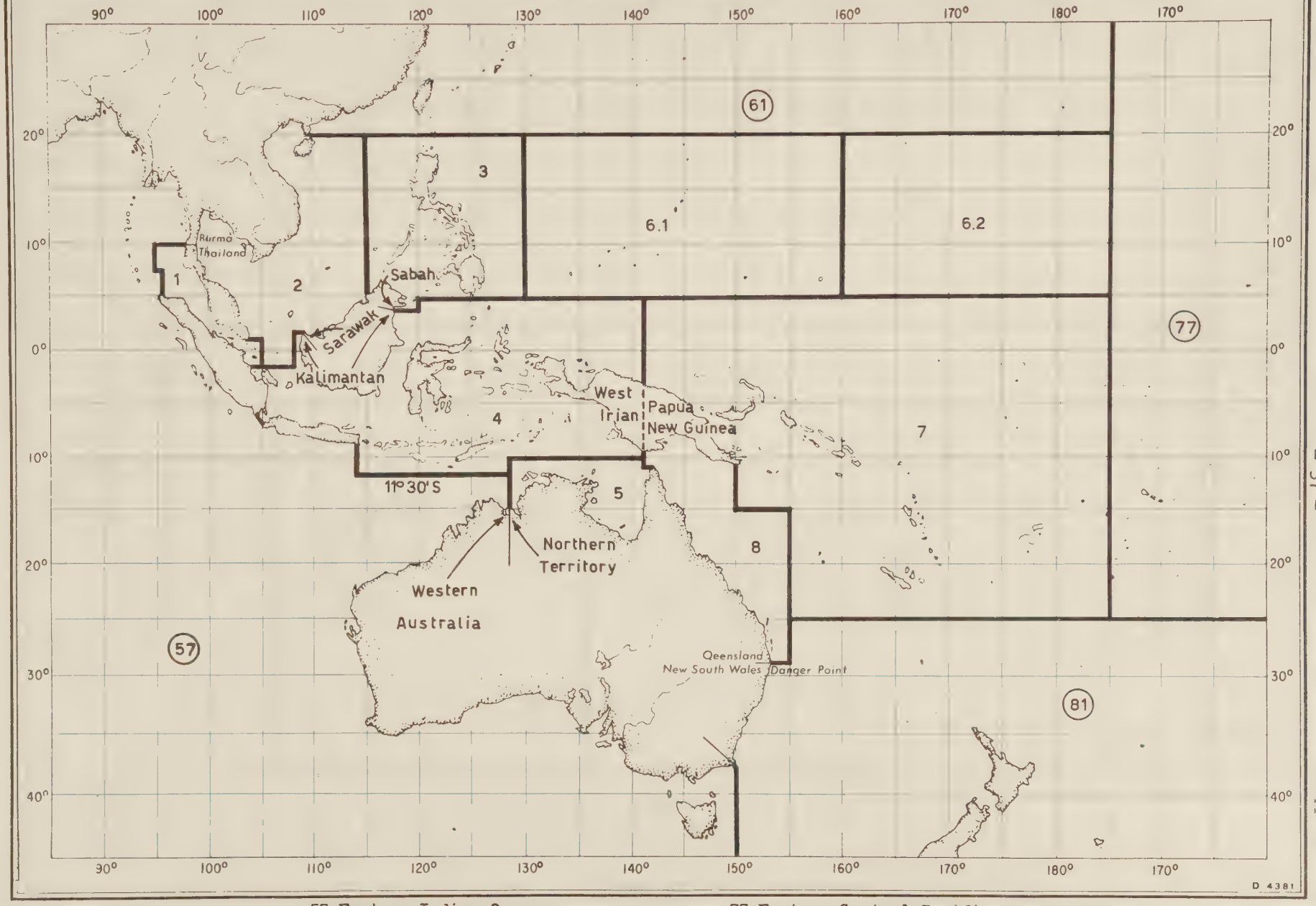
Proposed Sub-area Boundaries



51	Western Indian Ocean	71	Western Central Pacific
58	Antarctic Indian Ocean	81	Southwest Pacific
61	Northwest Pacific	88	Antarctic Pacific

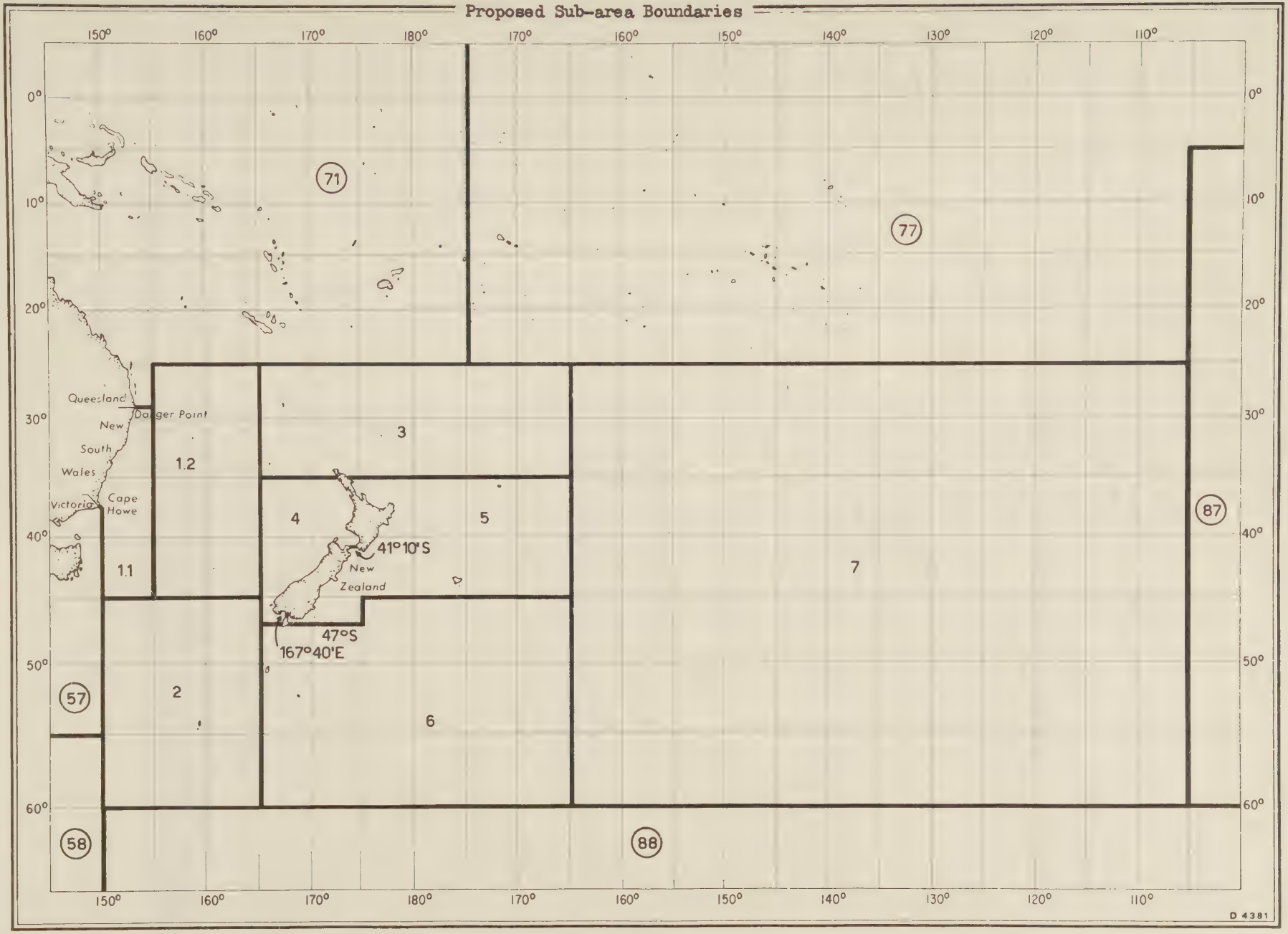
IPFC/IOFC STATISTICAL REGION: WESTERN CENTRAL PACIFIC OCEAN AREA (71)

Proposed Sub-area Boundaries



57 Eastern Indian Ocean
61 Northwest Pacific
77 Eastern Central Pacific
81 Southwest Pacific

IPFC/IOFC STATISTICAL REGION: SOUTHWEST PACIFIC OCEAN AREA(81)



57 Eastern Indian Ocean
58 Antarctic Indian Ocean
71 Western Central Pacific
77 Eastern Central Pacific
87 Southeast Pacific
88 Antarctic Pacific

Appendix XV

Proposed Area Statistical Lists of Aquatic Animals and Plants by ISSCAAP [1/]

Divisions and Groups

Area	51	Western Indian Ocean
	57	Eastern Indian Ocean
	71	Western Central Pacific

1/ International Standard Statistical Classification of Aquatic Animals and Plants

Note: The lists here presented take into account work undertaken by the FAO Secretariat during the period between the Third Session of the IPFC/IOFC Joint Working Party of Experts on Indian Ocean and Western Pacific Fishery Statistics and the preparation of this Appendix.

INTERNATIONAL STANDARD STATISTICAL CLASSIFICATION OF AQUATIC ANIMALS AND PLANTS (ISSCAAP)

Division	Group	
1		FRESHWATER FISHES
	11	Carps, barbels and other cyprinids
	12	Tilapias and other cichlids
	13	Miscellaneous freshwater fishes
2		DIADROMOUS FISHES
	21	Sturgeons, paddlefishes, etc.
	22	River eels
	23	Salmons, trouts, smelts, etc.
	24	Shads, milkfishes, etc.
	25	Miscellaneous diadromous fishes
3		MARINE FISHES
	31	Flounders, halibuts, soles, etc.
	32	Cods, hakes, haddocks, etc.
	33	Redfishes, basses, congers, etc.
	34	Jacks, mullets, sauries, etc.
	35	Herrings, sardines, anchovies, etc.
	36	Tunas, bonitos, billfishes, etc.
	37	Mackerels, snoeks, cutlassfishes, etc.
	38	Sharks, rays, chimaeras, etc.
	39	Miscellaneous marine fishes
4		CRUSTACEANS
	41	Freshwater crustaceans
	42	Sea-spiders, crabs, etc.
	43	Lobsters, spiny-rock lobsters, etc.
	44	Squat-lobsters, nephrops, etc.
	45	Shrimps, prawns, etc.
	46	Krill, planktonic crustaceans, etc.
	47	Miscellaneous marine crustaceans

Division	Group	
5		MOLLUSCS
	51	Freshwater molluscs
	52	Abalones, winkles, conchs, etc.
	53	Oysters
	54	Mussels
	55	Scallops, pectens, etc.
	56	Clams, cockles, arkshells, etc.
	57	Squids, cuttlefishes, octopuses, etc.
	58	Miscellaneous marine molluscs
6		WHALES, SEALS AND OTHER AQUATIC MAMMALS
	61	Blue-whales, fin-whales, sperm-whales, etc.
	62	Minke-whales, pilot-whales, etc.
	63	Porpoises, dolphins, etc.
	64	Eared seals, hair-seals, walruses, etc.
	65	Miscellaneous aquatic mammals
7		MISCELLANEOUS AQUATIC ANIMALS
	71	Frogs and other amphibians
	72	Turtles and other reptiles
	73	Sea-squirts and other tunicates
	74	Horseshoe crabs and other arachnoids
	75	Sea-urchins, sea-cucumbers and other echinoderms
	76	Miscellaneous aquatic invertebrates
8		MISCELLANEOUS AQUATIC ANIMAL PRODUCTS
	81	Pearls, mother-of-pearl, shells, etc.
	82	Corals
	83	Sponges
	84	Aquatic bird guano, eggs, etc.
9		AQUATIC PLANTS
	91	Brown seaweeds
	92	Red seaweeds
	93	Green seaweeds and other algae
	94	Miscellaneous aquatic plants

STATISTICAL LIST OF AQUATIC ANIMALS AND PLANTS

ISSCAAP				STATISTICAL ITEMS BY AREA		
Division			Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2	Diadromous	23	Salmons, trouts, smelts, etc.		Salmonoids, n.e.i. Salmonoidei	
		24	Shads, milkfishes, etc.	Hilsa-like shads *Ilisha (=Paralosa)* spp. Milkfish *Chanos chanos* True Hilsa *Hilsa ilisha* Others	Hilsa-like shads *Ilisha (=Paralosa)* spp. Milkfish *Chanos chanos* True Hilsa *Hilsa ilisha* Others	Chacunda gizzard shad *Anodontostoma chacunda* Indian pellona *Pellona ditchela* Miscellaneous diadromous clupeoids Clupeoidei Milkfish *Chanos chanos*
		25	Miscellaneous diadromous fishes	Barramundi *Lates calcarifer* Others	Barramundi *Lates calcarifer* Others	Barramundi *Lates calcarifer* Others
3	Marine Fishes	31	Flounders, halibuts, soles, etc.	Indian Halibut *Psettodes erumei* Malabar Soles *Cynoglossus semi-fasciatus* Tonguefishes Cynoglossidae Others	Sand flounders *Rhombosolea* spp. Others	Tonguefishes (=Tonguesoles) Cynoglossidae

ISSCAAP				STATISTICAL ITEMS BY AREA		
Division		Group		51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	Marine Fishes (cont'd)	32	Cods, hakes, haddocks, etc.	Unicorn-cod *Bregmaceros macclellandi* Cape hakes (=Stockfishes) *Merluccius capensis* *M. paradoxus* Southern red rock cod *Physiculus barbatus* Species group 32 - Quantities n.e.i.	Miscellaneous	
		33	Redfishes, basses, congers, etc.	Bombay-duck *Harpodon nehereus* Marine catfishes Ariidae Lizardfishes Synodontidae Pike-congers *Muraenesox* spp. Groupers *Epinephelus* spp. Seabasses, seaperches Serranidae	Bombay-duck *Harpodon nehereus* Marine catfishes *Arius (=Tachisurus)* spp. Lizardfishes Synodontidae Pike-congers *Muraenesox* spp. Sillago-whitings Sillaginidae Milk trevally *Lactarius lactarius*	Bombay-duck *Harpodon nehereus* Marine catfishes *Arius (=Tachisurus)* spp. Catfish eels *Plotosus* spp. Lizardfishes *Saurida* spp. Sharptooth pike-eel *Muraenesox cinereus* Groupers *Epinephelus* spp.

ISSCAAP				STATISTICAL ITEMS BY AREA		
	Division		Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	Marine Fishes (cont'd)	33	Redfishes, basses, congers, etc. (cont'd)	Milk trevally *Lactarius lactarius* Snappers Lutjanidae Threadfin breams Nemipteridae Ponyfishes *Leiognathus* spp. *Gazza* spp. Grunts (=Grunters) Pomadasyidae Croakers, drums Sciaenidae Seabreams Sparidae Goatfishes *Upeneus* spp. Percoids, n.e.i. Percoidei Species group 33 - Quantities n.e.i.	Australian ruff *Arripis georgianus* Australian salmon *Arripis trutta* Snappers Lutjanidae Threadfin breams Nemipteridae Slipmouths *Leiognathus* spp. Croakers, drums Sciaenidae Golden snapper (=Seabream) *Chrysophrys aurata* Seabreams Sparidae Goatfishes *Upeneus* spp. Morwongs *Nemadactylus* spp. Percoids, n.e.i. Percoidei	Seabasses, seaperches Serranidae Jarbua therapon *Therapon jarbua* Sillago-whitings Sillaginidae Milk trevally *Lactarius lactarius* Moonfish *Mene maculata* Mangrove red snapper *Lutjanus argentimaculatus* Red snappers n.e.i. *Lutjanus* spp. 2/ Fusiliers *Caesio* spp. Snappers, n.e.i. Lutjanidae Threadfin-breams *Nemipterus* spp. Mojarras (=Silver-biddies) *Gerres* spp.

2/ See section 3.3 item vii

ISSCAAP				STATISTICAL ITEMS BY AREA		
	Division		Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	Marine Fishes (cont'd)	33	Redfishes, basses, congers, etc. (cont'd)		Latchet *Pterygotrigla polyommata* Flatheads Platycephalidae Species group 33 - Quantities n.e.i.	Ponyfishes *Leiognathus* spp. Lined silver grunt *Pomadasys hasta* Blotched grunt *Pomadasys maculatus* Drums *Sciaena* spp. Croakers, drums, n.e.i. Sciaenidae Golden snapper *Crysophrys aurata* Seabreams Sparidae Goatfishes *Upeneus* spp. Spotted sicklefish *Deprane punctata* Wrasses Labridae

ISSCAAP				STATISTICAL ITEMS BY AREA		
	Division		Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	Marine Fishes (cont'd)	33	Redfishes, basses, congers, etc. (cont'd)			Percoids, n.e.i. Percoidei Surgeonfishes Acanthuridae Pacific gobies Gobiidae Flatheads Platycephalidae Triggerfishes *Balistes* spp. Indo-Pacific leatherjackets Tetraodontidae Species group 33 - Quantities, n.e.i.
		34	Jacks, mullets, sauries, etc.	Garfish and half-beaks Hemirhamphidae Indo-Pacific flyingfishes Exocoetidae Barracudas *Sphyraena* spp. Mullets *Mugil* spp.	Garfish and half-beaks Hemirhamphidae Indo-Pacific flyingfishes Exocoetidae Barracudas *Sphyraena* spp. Mullets *Mugil* spp.	Garfish and half-beaks Hemirhamphidae Barracudas *Sphyraena* spp. Mullets *Mugil* spp. Silversides (=Sand smelts) Atherinidae

ISSCAAP				STATISTICAL ITEMS BY AREA		
	Division		Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	Marine Fishes (cont'd)	34	Jacks, mullets, sauries, etc. (cont'd)	Threadfins Polynemidae Bluefish (=Tailor) *Pomatomus (=Temnodon) saltator (=saltatrix)* Jack and horse mackerels *Trachurus* spp. Scads 3/ *Decapterus* spp. Six-banded trevally *Caranx sexfasciatus* Jacks, trevallies, n.e.i. *Caranx* spp. Pompanos and Queenfishes *Trachinotus* spp. *Chorinemus* spp. Amberjacks (=Yellowtail jacks) *Seriola* spp. Carangids, n.e.i. Carangidae	Threadfins Polynemidae Bluefish (=Tailor) *Pomatomus (=Temnodon) saltator (=saltatrix)* Sixbanded trevally *Caranx sexfasciatus* Pompanos *Trachinotus* spp. Amberjacks (=Yellowtail jacks) *Seriolo* spp. Carangids, n.e.i. Carangidae Black and white pomfrets *Stromateus cinereus* *S. niger* Species group 34 - Quantities, n.e.i.	Threadfins Polynemidae Bluefish (=Tailor) *Pomatomus (=Temnodon) saltator (=saltatrix)* Russell's scad *Decapterus russelli* Scads, n.e.i. 3/ *Decapterus* spp. Jacks, trevallies *Caranx* spp. Pompanos *Trachinotus* spp. Bigeye scad *Selar crumenophthalmus* Yellow striped trevally *Selaroides leptolepsis* Carangids, n.e.i. Carangidae Pomfrets, n.e.i. *Stromateoides* spp. *Stromateus* spp.

3/ See section 3.3, item vii.

ISSCAAP				STATISTICAL ITEMS BY AREA		
	Division		Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	Marine Fishes (cont'd)	34	Jacks, mullets, sauries, etc. (cont'd)	Silver and Chinese pomfrets *Pampus argenteus* *P. chinensis* Pomfrets, n.e.i. Stromateidae Species group 34 - Quantities, n.e.i.		Species Group 34 - Quantities, n.e.i.
		35	Herrings, sardines, anchovies, etc.	Indian oil-sardine (=Sardinella) *Sardinella longiceps* Sardinella, n.e.i. *Sardinella* spp. Anchovies Engraulidae Clupeoids, n.e.i. Clupeoidei Wolf-herrings *Chirocentrus dorab* *C. nudus*	Indian oil-sardine (=Sardinella) *Sardinella longiceps* Sardinella, n.e.i. *Sardinella* spp. Anchovies Engraulidae Clupeoids, n.e.i. Clupeoidei Wolf-herrings *Chirocentrus dorab* *C. nudus*	Indian oil-sardine (=Sardinella) *Sardinella longiceps* Spotted herring *Herklotsichthys punctatus* Anchovies Engraulidae Clupeoids, n.e.i. Clupeoidei Wolf-herrings *Chirocentrus dorab* *C. nudus*
		36	Tunas, 4/ bonitos, billfishes, etc.	Narrow-barred king mackerel *Scomberomorus commerson* King mackerels, n.e.i. *Scomberomorus* spp.	Narrow-barred king mackerel *Scomberomorus commerson*	Narrow-barred king mackerel *Scomberomorus commerson* King mackerels, n.e.i. *Scomberomorus* spp.

4/ See section 3.3, item iii

ISSCAAP				STATISTICAL ITEMS BY AREA		
	Division		Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	Marine fishes (cont'd)	36	Tunas, bonitos, billfishes, etc. (cont'd)	Indo-Pacific sailfish *Istiophorus platypterus (=albicans, =immaculatus, =gladius, =orientalis)* Indo-Pacific blue marlin *Makaira mazara (=nigricans)* Black marlin *Makaira indica* Pacific striped marlin *Tetrapturus audax (=Makaira mitsukurii)* Broadbill swordfish *Xiphias gladius* Frigate mackerel *Auxis thazard* Skipjack tuna (=Oceanic skipjack) *Katsuwonus (=Euthynnus) pelamis* Bluefin tuna, Southern *Thunnus maccoyii*	Indo-Pacific sailfish *Istiophorus platypterus (=albicans, =immaculatus, =gladius, =orientalis)* Indo-Pacific blue marlin *Makaira mazara (=nigricans)* Black marlin *Makaira indica* Pacific striped marlin *Tetrapturus audax (=Makaira mitsukurii)* Broadbill swordfish *Xiphias gladius* Skipjack tuna (=Oceanic skipjack) *Katsuwonus (=Euthynnus) pelamis* Bluefin tuna, Southern *Thunnus maccoyii* Yellowfin tuna *Thunnus albacares*	Indo-Pacific sailfish *Istiophorus platypterus (=albicans, =immaculatus, =gladius, =orientalis)* Indo-Pacific blue marlin *Makaira mazara (=nigricans)* Pacific striped marlin *Tetrapturus audax (=Makaira mitsukurii)* Broadbill swordfish *Xiphias gladius* Skipjack tuna (=Oceanic skipjack) *Katsuwonus (=Euthynnus) pelamis* Bluefin tuna, Pacific *Thunnus thynnus orientalis* Yellowfin tuna *Thunnus albacares*

ISSCAAP				STATISTICAL ITEMS BY AREA		
	Division		Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	Marine fishes (cont'd)	36	Tunas, bonitos, billfishes, etc. (cont'd)	Yellowfin tuna *Thunnus albacares* Albacore (=Longfin white tuna) *Thunnus alalunga* Bigeye tuna *Thunnus obesus* Eastern little tuna *Euthynnus affinis* Species group 36 - Quantities, n.e.i.	Albacore (=Longfin white tuna) *Thunnus alalunga* Bigeye tuna *Thunnus obesus* Species group 36 - Quantities, n.e.i.	Albacore (=Longfin) white tuna) *Thunnus alalunga* Bigeye tuna *Thunnus obesus* Eastern little tuna *Euthynnus affinis* Species group 36 - Quantities, n.e.i.
		37	Mackerels, snoeks, cutlass-fishes, etc.	Snoek (=Barracouta) *Thyrsites (=Leionura) atun* Hairtails *Trichiurus* spp. Indian mackerel *Rastrelliger kanagurta* Species group 37 - Quantities, n.e.i.	Snoek (=Barracouta) *Thyrsites (=Leionura) atun* Hairtails *Trichiurus* spp. Indian mackerel *Rastrelliger kanagurta* Indo-Pacific mackerels *R. brachysoma* *R. neglectus* Species group 37 - Quantities, n.e.i.	Largehead hairtail *Trichiurus haumela* Malayan hairtail *Eupleurogrammus muticus* Indian mackerel *Rastrelliger kanagurta* Indo-Pacific mackerels *R. brachysoma* Indo-Pacific and Indian mackerels n.e.i. *R. kanagurta* *R. brachysoma*

ISSCAAP				STATISTICAL ITEMS BY AREA		
Division			Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
3	Marine fishes (concluded)	37	Mackerels, snoeks, cutlass-fishes, etc. (cont'd)			Species group 37 - Quantities, n.e.i.
		38	Sharks, rays, chimaeras, etc.	Various sharks Skates and rays *Rajiformes* Species group 38 - Quantities, n.e.i.	Various sharks Skates and rays *Rajiformes* Species group 38 - Quantities, n.e.i.	Liveroil sharks *Galeorhinus* spp. Various sharks Skates and rays *Rajiformes* Species group 38 - Quantities, n.e.i.
		39	Miscellaneous marine fishes 5/	Miscellaneous marine fishes	Miscellaneous marine fishes	Miscellaneous marine fishes
4	Crustaceans	42	Sea-spiders, crabs, etc.	Swimming crabs *Portunus* spp. Mud crab *Scylla serrata* Species group 42 - Quantities, n.e.i.	Species group 42 - Quantities, n.e.i.	Swimming crabs *Portunus* spp. Mud crab *Scylla serrata* Species group 42 - Quantities, n.e.i.
		43	Lobsters, spiny rock lobsters, etc. 6/	Spiny lobsters, n.e.i. *Panulirus* spp. Natal spiny lobster *Palinurus gilchristi*	Australian spiny lobster *Panulirus cygnus* Spiny lobsters *Panulirus* spp. Southern rock lobster *Jasus lalandii*	Locust lobsters Scyllaridae Spiny lobsters *Panulirus* spp. Lobsters, n.e.i.

5/ See section 3.3, item iv
6/ See section 3.3, item vi

ISSCAAP				STATISTICAL ITEMS BY AREA		
	Division		Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
4	Crustaceans (concluded)	45	Shrimps, prawns, etc. 7/	Penaeid shrimps and prawns Non-Penaeid shrimps & prawns Shrimps and prawns, n.e.i. Natantia	Banana prawn *Penaeus merguiensis* Tiger prawn *Penaeus esculentus* Australian Western prawn *Penaeus latisulcatus* Endeavour prawn *Metapenaeus endeavouri* Penaeid shrimps & prawns, n.e.i. Non-Penaeid shrimps & prawns Shrimps & prawns n.e.i. Natantia	Banana prawn *Penaeus merguiensis* Tiger prawn *Penaeus esculentus* Endeavour prawn *Metapenaeus endeavouri* Penaeid shrimps and prawns, n.e.i. Shrimps and prawns, n.e.i. Natantia
		47	Miscellaneous marine crustaceans	Miscellaneous marine crustaceans	Miscellaneous marine crustaceans	Miscellaneous marine crustaceans
5	Molluscs	52	Abalones, winkles, conchs, etc.		Abalones	Gastropods

7/ See section 3.3, item v

ISSCAAP				STATISTICAL ITEMS BY AREA		
	Division		Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
5	Molluscs (concluded)	53	Oysters	Miscellaneous oysters	Flat oysters *Ostrea* spp. Cupped oysters *Crassostrea* spp.	Sydney cupped oyster *Crassostrea commercialis*
		54	Mussels		Australian mussel *Mytilus planulatus*	Sea mussel *Mytilus smaragdinas*
		55	Scallops, pectens, etc.		Australian scallop *Pecten meridionalis* Scallops, n.e.i. Pectinidae	Scallops Pectinidae
		56	Clams, cockles, arkshells, etc.	Clams Teleodesmacea	Clams Teleodesmacea	Blood cockle *Anadara granosa*
		57	Squids, cuttlefishes, octopuses, etc.	Cuttlefishes *Sepia* spp. *Sepiola* spp. Squids Loliginidae Ommastrephidae Octopuses *Polypus* spp. *Octopus* spp.	Cuttlefishes *Sepia* spp. Common squids *Loligo* spp. Octopuses *Octopus* spp.	Cuttlefishes *Sepia* spp. *Sepiola* spp. Common squids *Loligo* spp. Squids, n.e.i. Loliginidae Ommastrephidae
		58	Miscellaneous marine molluscs	Miscellaneous marine molluscs	Miscellaneous marine molluscs	Miscellaneous marine molluscs

ISSCAAP				STATISTICAL ITEMS BY AREA		
	Division		Group	51 Western Indian Ocean	57 Eastern Indian Ocean	71 Western Central Pacific
(1)	(2)	(3)	(4)	(5)	(6)	(7)
7	Miscellaneous aquatic animals	72	Turtles and other reptiles	Marine turtles *Chelonia*		Marine turtles *Chelonia*
		75	Sea-urchins Sea-cucumbers, and other echinoderms	Sea-cucumbers Holothurioidea		Sea-cucumbers Holothurioidea
8	Miscellaneous aquatic animal products	81	Pearls, mother-of-pearl, shells, etc.	Chank shells from *Xancus* spp. Trochus shells from *Trochus* spp. Miscellaneous shells n.e.i.	Chank shells from *Xancus* spp. Pearl oyster shells from *Pinctada (=Margaritifera)* spp.	Trochus shells from *Trochus* spp. Green snail shells from *Turbo* spp. Pearl oyster shells from *Pinctada (=Margaritifera)* spp.
		82	Corals	Corals *Corallium* spp.		
		83	Sponges			Sponges *Spongia* spp. *Hippospongia* spp.
9	Aquatic plants	92	Red seaweeds	Red seaweeds Rhodophyceae		
		94	Miscellaneous aquatic plants	Miscellaneous aquatic plants		Miscellaneous aquatic plants

Appendix XVI

INTERNATIONAL STANDARD STATISTICAL CLASSIFICATION OF FISHING GEAR (ISSCFG)

01.0.0	SURROUNDING NETS
01.1.0	With purse-lines
01.1.1	One boat
01.1.2	Two boats
01.2.0	Without purse-lines
02.0.0	SEINE NETS
02.1.0	Beach seines
02.2.0	Boat seines
02.2.1	Danish seines
02.2.2	Scottish seines [a]
02.2.3	Pair seines [a]
02.2.4	Other boat seines
03.0.0	TRAWLS
03.1.0	Bottom trawls
03.1.1	Beam trawls
03.1.2	Otter trawls
03.1.3	Pair trawls
03.2.0	Midwater trawls
03.2.1	Otter trawls
03.2.2	Pair trawls
03.3.0	Other trawls
04.0.0	DREDGES
04.1.0	Boat dredges
04.2.0	Hand dredges
05.0.0	LIFT-NETS
05.1.0	Portable lift-nets
05.2.0	Boat-installed lift-nets
05.3.0	Shore-operated stationary lift-nets
06.0.0	FALLING GEAR
06.1.0	Cast-nets
06.2.0	Cover-pots
06.3.0	Others
07.0.0	GILL-NETS AND ENTANGLING NETS
07.1.0	Set-nets
07.2.0	Drift-nets
07.3.0	Encircling drive-in-nets

08.0.0	TRAPS
08.1.0	Stationary uncovered pound-nets
08.2 0	Covered-pots and fyke-nets
08.2.1	Covered-pots (Portable traps) [a]
08.2.2	Fyke-nets [a]
08.3.0	Stow-nets
08.4.0	Others
08.4.1	Barriers, fences, weirs, corrals, etc.
08.4.2	Aerial traps
09.0.0	HOOKS-AND-LINES
09.1.0	Hand-lines and pole-lines
09.1.1	Tuna pole and line
09.1.2	Others, including vertical long lines
09.2.0	Set-lines
09.3.0	Drift-lines
09.3.1	Tuna long lines
09.3.2	Others
09.4.0	Troll-lines
10.0.0	GRAPPLING AND WOUNDING GEAR
10.1.0	Harpoons
10.2.0	Others
11.0.0	HARVESTING MACHINES
11.1.0	Pumps [a]
11.2.0	Mechanized dredges [a]
11.3.0	Other appliances [a]
12.0.0	OTHER (specified)
12.1.0	Hand and landing nets including scoop and push nets
12.2.0	Drive-in-nets n.e.s.
12.3.0	Gathering by hand or with simple implement, with or without diving equipment
12.3.1	Without diving
12.3.2	With diving, without equipment
12.3.3	With diving, with equipment
12.4.0	Trained animals
12.5.0	Electrophysically induced narcosis
30.0.0	OTHERS (unspecified)

a/ Not applicable in IPFC/IOFC Region

MR/F6756/E/3.75/1/600